

1. (Twice Amended) A multilayered air-fuel ratio sensor having a plurality of stacked layers comprising:

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a plurality of multilayered substrate layers comprising at least two solid electrolytic substrate layers and at least one insulating substrate layer; and
a plurality of boundary layers located at respective boundaries of said multilayered substrate layers[, each boundary layer being made of a heterogeneous material different from that of said substrate layers],

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wherein said plurality of the boundary layers comprises[:] at least one first [heterogeneous] boundary layer directly interposed between two adjacent solid electrolytic substrate layers[:] as well as at least one second [heterogeneous] boundary layer directly interposed between one of said solid electrolytic substrate layers and said at least one insulating substrate layer [which are located adjacent to each other]; and

said first and second boundary layers have a sintered particle size larger than those of said substrate layers [; and

said first and second heterogeneous boundary layers have a thickness in a range of 10 to 100 μm].

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2. (Twice Amended) The multilayered air-fuel ratio sensor according to claim 1, wherein said ~~first and second~~ ^{boundary layer has} [heterogeneous] ~~boundary layers have~~ a [porous rate] porosity larger than those of [neighboring] said substrate layers.

Please cancel claim 3.